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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,946

01/31/2006

Janet Preston

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04/30/2008

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EXAMINER

AHMED, SHEEBA

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,946	Applicant(s) PRESTON ET AL.	
	Examiner SHEEBA AHMED	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) 16-73 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 57-74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/15/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-15 and 57-74 in the reply filed on January 31, 2008 is acknowledged. The traversal is on the grounds that the Applicants believe that no serious burden on the Office exists if all four groups of claims are examined in this application. However, the Examiner disagrees. Restriction is proper when there would be a serious burden on the Examiner if restriction were not required, as evidenced by the separate classification and field of search of each restricted group of claims. Hence, the restriction requirement is maintained.

Claims 1-74 are pending of which 1-15 and 57-74 are now under consideration.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-15 and 57-74 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown (US 5653795 A).

Brown et al. disclose a method for forming fillers for cellulosic products, and products made using the fillers. The method for producing fillers comprises first providing an ionically dispersed aqueous slurry comprising from about 1 percent to

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about 30 percent solid mineral particles by weight. The mineral particles are selected from the group consisting of calcium carbonate, calcium hydroxide, magnesium carbonate, magnesium hydroxide, aluminum hydroxide, calcium sulfate and mixtures thereof. Best results are achieved when using mineral suspensions comprising ground natural calcium carbonate or synthetically precipitated calcium carbonate or mixtures thereof. Ground natural calcium carbonate and synthetically precipitated calcium carbonate are typically derived from chalk, limestone or marble. The mineral particles typically are prismatic, rhombohedral, clustered prismatic or scalenohedral particles, but may be of a variety of morphological forms. Typically the mineral particles are in a mixture that includes "coarse particles" (particles having an equivalent spherical diameter of at least about 0.5 microns) and "fine particles" (particles having an equivalent spherical diameter of less than about 0.5 microns). Of the fine particles in such mixtures, typically some are "ultra-fine particles" (particles having an equivalent spherical diameter of less than about 0.2 microns). The mixtures are formed to contain particles that are sufficiently small in size to be useful as fillers or pigments for making paper and paper board. Due to the methods by which they are formed, it is typical for such mixtures to contain least 30 percent by weight of mineral particles having an equivalent spherical diameter of less than about 2 microns, and generally about 60 percent by weight of the mineral particles have an equivalent spherical diameter of less than about 2 microns. If the mineral particles are anionically dispersed, the anionic dispersant generally is selected from homopolymers or copolymers made from the group consisting of carboxylic acid containing vinyl monomers, sulfonic acid

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containing vinyl monomers, and mixtures thereof. More specifically, the anionic dispersing agent may be selected from the group consisting of polyacrylic acid homopolymers, polyacrylic acid copolymers, methacrylic acid homopolymers and copolymers, and mixtures thereof, with polyacrylic acid being a currently preferred anionic dispersing agent. Cationic polymeric dispersing agents generally are selected from the group consisting of poly-(alkyl diallyl) quaternary ammonium salts; quaternary ammonium cationic polymers obtained by copolymerizing aliphatic secondary amines with epichlorohydrin; poly (quaternary ammonium) polyether salts that contain quaternary nitrogen in a polymeric backbone chain extended by ether groups; polyamines; copolymers of acrylamide with cationic vinyl monomers; dimethyldiallylammonium chloride; low-molecular-weight polyethyleneimine polyelectrolytes; and mixtures thereof. A currently preferred cationic dispersing agent is dimethylamine epichlorohydrin copolymer. The low-molecular-weight selective aggregating agent can be selected from the group consisting of poly-(alkyl diallyl) quaternary ammonium salts; quaternary ammonium cationic polymers obtained by copolymerizing aliphatic secondary amines with epichlorohydrin; poly (quaternary ammonium) polyether salts that contain quaternary nitrogen in a polymeric backbone chain extended by ether groups; polyamines; copolymers of acrylamide with cationic vinyl monomers; dimethylamine epichlorohydrin copolymers; dimethyldiallylammonium chloride homopolymer; dimethyldiallylammonium chloride copolymer; divalent metal ion salts; trivalent metal ion salts; polyethyleneimine polyelectrolytes; polyacrylic acid homopolymer; polyacrylic acid water-soluble salts; carboxyl containing polymers

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derived from methacrylic acid, itaconic acid and crotonic acid; and mixtures thereof.

Currently preferred low-molecular-weight selective aggregating agents include dimethyldiallylammonium chloride homopolymer as a cationic aggregating agent and polyacrylic acid homopolymer as an anionic aggregating agent. The amount of the selective aggregating agent added to the ionically dispersed suspension may vary, and is best determined by considering the characteristics desired in the suspension and the cost of the aggregating agent. However, by way of example, the selective aggregating agent may be added to the slurry of ionically dispersed mineral particles in an amount of from about 5 lbs to about 50 lbs per ton of mineral particles, preferably from about 5 lbs to about 25 lbs per ton. A working embodiment of the method for producing fillers comprises first providing an ionically dispersed aqueous slurry comprising from about 1 weight percent to about 15 weight percent ground natural calcium carbonate or synthetically precipitated calcium carbonate. The slurry can be purchased as a dispersed slurry, or the method may include the step of adding a dispersing agent to the mineral suspension to provide a slurry. Best results are achieved when the aqueous slurry is anionically dispersed and comprises from about 1 percent to about 10 percent ground natural calcium carbonate or synthetically precipitated calcium carbonate (See entire document; specifically col.1, lines 5-7, col. 2, lines 53-67, col. 3, lines 1-20, col. 3, lines 30-52, col. 4, lines 12-31, col. 4, lines 46-54, and col. 4, lines 61-67). All limitations of claims 1-15 and 57-74 are disclosed in the above reference.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHEEBA AHMED whose telephone number is (571)272-1504. The examiner can normally be reached on Monday-Friday from 8am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sheeba Ahmed/
Primary Examiner, Art Unit 1794